of pigment. A case of the speaker in which a defect of the mucous membrane in the mouth was replaced by the skin of the cheek and on which hair continued to grow toward the buccal cavity seems to question the validitv of the doctrines of Virchow, that cells conform to their surrounding.—*Beilage zur Centralblatt f. Chir.*, 1888, No. 24.

VI. The Histological Phenomena Involved in the Union of Peritoneal Folds. By DR. ERNST FRASER (Erlangen.) In this experimental work the author used guinea pigs, rabbits, dogs and cats. By an original method folds of intestine were brought into contact with each other in such a manner as to cause a union over a broad surface of peritoneum of the intestine or intestine and abdomen. Peritoneal surfaces thus opposed may unite (1) By direct union of one endothelial surface with the other. Here we find under the microscope with the highest powers simply one endothelial surface opposed to the other—absolutely nothing else. These surfaces cannot be pulled apart without disturbing anatomical relations with the subserosa. This shows some actual union. No wandering cells or exudate is found. The author theorizes that this union is caused by an interweaving of the endothelial elements of both surfaces by means of spindle shaped processes; this mode of direct union may be seen after space of 36 hours. In the second form of union (2) The layers of apposed endothelium are first thrown off and there is a union between the subendothelial layers of the peritoneum. The endothelium is first noticed to become swollen, to proliferate and partly disintegrate so that there may be formed two or three layers of endothelial cells. The proliferated cells have a more cubical shape than the original endothelium. Karyokinesis is seen. But there is no marked presence of wandering cells. The subendothelial layers unite by means of their spindle-shaped elements having numerous processes. These connective tissue elements (Fibroplasts of Ziegler and Neumann) have already been described. Their processes become continuous with the fibrillæ of the new formed connective tissue. These spindle-shaped cells with many processes proliferate to a marked degree. In some spots this proliferation is more marked than others, where there is no direct union of the subendothelial layers by means of their connective tissue elements. This has been prevented in the author's specimens by the presence of minute spaces which subsequently became filled up with a new tissue (connective) with new formed vessels; thus in this second form of union we have two series of phenomena. This mode of union of subendothelial layers may be best seen in experiments where the endothelium has been destroyed by silver or other agent.

The above mode of union is seen after 2 to 4 days. The remaining forms of union of peritoneal surfaces with each other are (3) Union with formation of exudate and proliferation into the same of spindle shaped cells. (4) Formation of exudate and growth in the same of vascularized connective tissue. (5) Suppuration with subsequent formation of granulations. The author does not doubt that in the first and second forms of union the endothelial cells are converted subsequently into connective tissue elements.—*Zeitschr. f. Chir.*, bd. 27 heft 5 and 6.

HENRY KOPLIK (New York).

NERVOUS AND VASCULAR SYSTEMS.

I. Simultaneous Paralysis of the Ulnar and Radial Nerves from the use of Esmarch's Elastic Bandage. By HUGO KOEBNER, (Germany). A case of the above character is reported. The bandage was applied for an operation on the left elbow-joint. The use of the Faradic and constant current finally brought about restoration of function. It is recommended that the Esmarch bandage be only used in cases of prolonged operation, and that care be taken to avoid pressure beyond that which is needful for the purpose of emptying the vessels, and restraining the flow of blood to the parts within the field of operation.—*Deutsche Med. Woch.*, No. 18, 1888.

G. R. FOWLER (Brooklyn).

II. Clinical and Experimental Contributions to Ligature of the Femoral Veins Below Poupart's Ligament. By DR. ALEX. VON KORETZKY, (St. Petersburg). The author during an ope-